

# New records to the Compositae flora of Peru

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## Abstract

Twenty new records to Peruvian Compositae flora are listed and documented. The genera *Emilia* CASS., *Microseris* D. DON, and *Symphotrichum* NEES are cited for the first time.

## Introduction

In the Andes, the Compositae (Asteraceae) make up an important part of the flora and are found in all habitats from forest to páramo and puna, although they are not well-represented in the low elevation rain forests (FUNK 1997 a, FUNK et al. 1995).

The Compositae are a large and diverse family in Peru with 222 genera and 1432 species according to DILLON & HENSOLD (1993), but as with any checklist the names are constantly altering because of nomenclature changes, new records, newly described genera and species, and omissions. Several changes have occurred since the publication of the Catalogue of the Flowering Plants and Gymnosperms of Peru (BRAKO & ZARUCCHI 1993) including mainly the descriptions of new species, the descriptions of new genera, such as *Caxamarca* DILLON & SAGÁST. (DILLON & SAGÁSTEGUI 1999), the locating of Peruvian species of genera not previously known from Peru, such as *Chiliotrichiopsis* CABR. (NESOM et al. 2001), and the locating of Peruvian populations of species not previously reported from Peru, such as *Talamancalia putcalensis* (HIERON.) B. NORD. & PRUSKI and *Rolandra fruticosa* (L.) KUNTZE (BELTRÁN & PRUSKI 2000). Important realignments of taxa include, for instance, the species traditionally referred to *Vernonia*, which in Peru have been placed by ROBINSON (1999) into twelve newly described or resurrected genera, or the

re-arrangement of many species of *Werneria* moved into *Xenophyllum* (FUNK 1997b). Consequently, the total number of Peruvian Compositae has become significantly higher and no less than 240 genera and 1500 species are expected at present.

As a part of a more detailed ongoing analysis of the richness and diversity of the Compositae flora from Peru, twenty new records are provided in this paper; all information was based on routine determinations of collections housed mostly at USM and MOL. Exsiccatae for each species are cited and distribution records indicated in literature are included. The following additions leave no doubt about a future increase in the total number of Compositae species in Peruvian territory as further collections and additional identifications will be made.

### New Records

#### Astereae:

*Conyza altoandina* CABR., Bol. Soc. Argent. Bot. 14 (4): 347. 1972.

**Exsicc.: Dpto. Cusco:** Prov. Cdte. Espinar, Virginniyoc ca. 35 km de Yauri, camino de Yauri, puente viejo, Maucallacta hacia Sucuitambo, 4100 m, 13 Abr. 1987, NÚÑEZ et al. 7903 (USM, MO).

**Distribution:** Argentina (CABRERA 1978, NESOM 1990).

*Conyza uliginosa* (BENTH.) CUATR., Webbia 24: 216. 1969.

**Exsicc.: Dpto. Ancash:** Prov. Yungay, Huascarán National Park, Quebrada Huaripampa between Quebrada Paria and Morococha (8°56'S, 77°33'W), grassland with rare scattered shrubs or stands of *Polylepis*, 3930–4500 m, 13 Jan. 1985, SMITH et al. 9188 (USM, MO). **Dpto. Huánuco:** Prov. Ambo, Tomayquichua, Huarmiragra-Estanco, estepa húmeda de gramíneas y arbustos dispersos, ca. 3900 m, 5 Abr. 1996, GRANDA 1698 (MOL, MO).

*Diplostephium macrocephalum* S. F. BLAKE, Contr. U. S. Nat. Herb. 24: 74. 1922.

**Exsicc.: Dpto. Cajamarca:** Prov. Jaén, Sallique, El Páramo (5°40'S, 59°14'W), pajonal de puna 3300 m, 25 Jun. 1998, CAMPOS et al. 5094 (USM).

**Distribution:** Ecuador (ROBINSON et al. 1999).

*Symphytotrichum squamatum* (SPRENG.) NESOM, *Phytologia* 77 (3): 292. 1994.

**Exsicc.: Dpto. La Libertad:** Ca. 4 km NW of Coina, rocky hillsides with southern exposure, ca. 1500 m, 30 Dec. 1978, DILLON & TURNER 1514 (USM, MO, F). **Dpto. Lima:** Prov. Canta, Trapiche, ribera semi-inundada del río Chillón, 700–800 m, 31 Ago. 1992, GRANDA & ALEGRÍA 702 (MOL).

**Distribution:** Bolivia, Paraguay, Uruguay, Argentina (CABRERA 1963), Colombia (CUATRECASAS 1969).

### Eupatorieae:

*Cronquistianthus leucophyllus* (H. B. K.) KING & H. ROB., *Phytologia* 23 (5): 411. 1972.

**Exsicc.: Dpto. Piura:** Prov. Huancabamba, camino a Suruguna, 2250 m, 10 Jun. 1961, ACLETO 511 (USM); Huancabamba: Porculla, Huarmaca, suelos pedregosos y secos, 2050 m, 4 Jun. 1994, LLATAS 3495 (USM).

**Distribution:** Ecuador (KING & ROBINSON 1987).

*Crossothamnus gentryi* KING & H. ROB., *Phytologia* 78 (5): 382. 1995.

**Exsicc.: Dpto. Amazonas:** Prov. Condorcanqui, cordillera del Cóndor, cima del cerro Machinaza, cabeceras del río Comainas, tributario al oeste del río Cenepa (3°52,7'S; 78°24,8'W), sobre meseta de roca arenosa con capa de humus, 2150 m, 21 Jul. 1994, BELTRÁN & FOSTER 1133 (USM, F).

**Distribution:** Ecuador (KING & ROBINSON 1995).

*Mikania pichinchensis* Hieron., *Bot. Jahrb. Syst.* 28: 576. 1901.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, San José de Lourdes, Camaná (5°00'S, 78°55'W), bosque primario 2000–2200 m, 20 Mar. 1997, CAMPOS & CORRALES 3590 (USM).

**Distribution:** Ecuador (KING & ROBINSON 1987).

*Mikania sylvatica* Klatt, *Bot. Jahrb. Syst.* 8: 37. 1886.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, San José de Lourdes, entre Garruchas y Quebrada Agua Negra (5°00'S, 78°57'W), bosque secundario, 980–1300 m, 20 Mayo 1997, CAMPOS & VARGAS 3294 (USM).

**Distribution:** Colombia, Ecuador (KING & ROBINSON 1987, ROBINSON et al. 1999).

*Ophryosporus serratifolius* (KUNTH) B. L. ROB., Contr. Gray Herb. 90: 3. 1930.

**Exsicc.:** Dpto. Cajamarca: Prov. Jaén, Sallique, Lanchal (5°40'S, 79°16'W), bosque secundario, 2400–2550 m, 4 Jul. 1998, CAMPOS et al. 5203 (USM).

**Distribution:** Ecuador (KING & ROBINSON 1987).

### Heliantheae:

*Acanthospermum australe* (LOEFL.) KUNTZE, Rev. Gen. Plant. 1: 303. 1891.

**Exsicc.:** Dpto. Madre de Dios: Iñapari, lugar ruderal, 5 Dic. 1978, GUTTE & MÜELLER 8557 (USM). Dpto. Puno: Prov. Sandia, valle Tambopata, cerca de San Juan del Oro, bosque perennifolio, 2100–2200 m, 14 Mayo 1966, FERREYRA 16717 (USM).

**Distribution:** USA, Martinica, St. Vincent, Grenada, Colombia, Venezuela, Guyana, French Guiana, Brazil, Bolivia, Paraguay, Uruguay, India, Hawaii (BLAKE 1921).

*Tithonia rotundifolia* (MILLER) S. F. BLAKE, Contr. Gray Herb. 52: 41. 1917.

**Exsicc.:** Dpto. Cajamarca: Prov. San Ignacio, Granja Quiracas (5°16'S, 78°46'W), bosque secundario, 600–800 m, 30 Ene. 1996, CAMPOS et al. 2289 (USM).

**Distribution:** USA, Mexico, Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Cuba, Haiti, Dominican Republic, Venezuela, Nigeria, Rhodesia, China (LA DUKE 1982).

*Xanthium strumarium* L., Spec. Plant. 2: 987. 1753.

**Exsicc.:** Dpto. Loreto: Maynas Iquitos, Uspa-Cano across Rio Itaya from Iquitos, low open usually inundated alluvial area, 30 Sept. 1975, McDANIEL & RIMACHI 20243 (USM).

**Distribution:** Venezuela (BADILLO 1997).

### Lactuceae:

*Microseris pygmaea* D. DON, Phil. Mag. 11: 388. 1832.

**Exsicc.:** Dpto. Lima: Prov. Canta, arriba de Lachaqui, camino de ascenso Quinán, estepa de gramíneas con arbustos dispersos, ca. 3800 m, 20 Mayo 1995, GRANDA 1438 (MOL, OSC, US).

**Distribution:** Chile (CHAMBERS 1955).

**Senecioneae:**

*Aequatorium limonense* B. NORD., Comp. Newsl. 31: 14. 1997.

**Exsicc.: Dpto. Cajamarca:** Tabaconas, Santuario Nacional Tabaconas-Namballe, Quebrada Chichilapa Grande (5°15'S, 79°18'W), bosque primario con predominancia de *Chusquea*, 2600–2800 m, 12 Nov. 1998, CAMPOS et al. 5656 (USM).

**Distribution:** Ecuador (NORDENSTAM 1997).

*Emilia sonchifolia* (L.) DC., Prodr. 6: 302. 1837.

**Exsicc.: Dpto. Ucayali:** Pimental, carretera Jorge Basadre Km 34, 600 m, 13 Ene. 2001, BELTRÁN 3659 (USM).

**Distribution:** Panama (BARKLEY 1975), Venezuela (PRUSKI 1997), Ecuador (ROBINSON et al. 1999).

*Gynoxys foliosa* (RUSBY) S. F. BLAKE, Contr. U. S. Natl. Herb. 24: 86. 1922.

**Exsicc.: Dpto. Cusco:** Prov. La Convención, Echarati, East rio Apurimac NE Pueblo Libre, up mountain of Anchiway and Bellavista, south Cordillera Vilcabamba (12°51'S, 73°30'W), cloud forest, 2445 m, 3 Ago. 1998, NUÑEZ et al. 23373 (US, USM).

**Distribution:** Bolivia (FOSTER 1958).

*Pentacalia lanceolifolia* (CUATR.) CUATR., Phytologia 49 (3): 247. 1981.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, San José de Lourdes, cerro Picorana (4°58'S, 78°53'W), bosque enano, 2830 m, 17 Ago. 1998, CAMPOS et al. 5542 (USM, MO).

**Distribution:** Ecuador (CUATRECASAS 1981, ROBINSON et al. 1999).

*Pentacalia theaefolia* (BENTH.) CUATR., Phytologia 49 (3): 250. 1981.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, San José de Lourdes, cerro Picorana (4°58'S, 78°53'W), bosque enano, 2830 m, 17 Ago. 1998, CAMPOS et al. 5533 (USM, MO).

**Distribution:** Ecuador (ROBINSON et al. 1999), Colombia (CUATRECASAS 1981).

### Vernoniae:

*Critoniopsis sevellana* (CUATR.) H. ROB., *Phytologia* 46 (7): 441. 1980.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, La Coipa, La Lima (5°26'S, 78°55'W), bosque secundario, 1800 m, 14 Jun. 1997, CAMPOS & GARCÍA 3975 (USM); Huarango, Nuevo Mundo, Gosén (5°18'S, 78°44'W), bosque primario, 1590 m, 18 Jul. 1997, CAMPOS et al. 4178 (USM).

**Distribution:** Ecuador (ROBINSON et al. 1999).

*Vernonanthura divaricata* (SPRENG.) H. ROB., *Phytologia* 78 (5): 385. 1995.

**Exsicc.: Dpto. Cajamarca:** Prov. San Ignacio, Chirinos, Pacasmayo (5°15'S, 78°55'W), 1700–1800 m, 23 Oct. 1997, CAMPOS & GARCÍA 4524 (USM).

**Distribution:** Brazil (ROBINSON 1999).

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## References

- BADILLO, V. M. 1997. Los géneros de Compositae (Asteraceae) de Venezuela: clave artificial para su determinación. *Ernstia* 6 (2-3): 51–168.
- BARKLEY, T. M. 1975. Senecioneae. In: WOODSON, R.E., SCHERY, R. W. et al., *Flora of Panama*, part IX, family 184. Compositae. *Ann. Missouri Bot. Gard.* 62 (4): 1244–1272.
- BELTRÁN, H. & J. PRUSKI 2000. *Talamancalia* y *Rolandra* (Asteraceae): dos nuevos registros para el Perú. *Arnaldoa* 7 (1-2): 13–18.
- BLAKE, S. F. 1921. Revision of the genus *Acanthospermum*. *Contr. U. S. Natl. Herb.* 20 (10): 383–392.
- BRAKO, L. & J. L. ZARUCCHI 1993. Catalogue of the Flowering Plants and Gymnosperms of Peru. *Monogr. Syst. Bot. Missouri Bot. Gard.* 45: 1–1286.
- CABRERA, A. L. 1963. Compositae. *Flora de la Provincia de Buenos Aires. Colecc. Ci. Inst. Tecnol. Agropec.* 4 (6): 1–443.
- CABRERA, A. L. 1978. Compositae. *Flora de la Provincia de Jujuy. Colecc. Ci. Inst. Tecnol. Agropec.* 13 (10): 1–726.
- CHAMBERS, K. L. 1955. A biosystematic study of the annual species of *Microseris*. *Contr. Dudley Herb.* 4 (7): 207–312.
- CUATRECASAS, J. 1969. Prima Flora Colombiana 3. Compositae-Astereae. *Webbia* 24 (1): 1–335.
- CUATRECASAS, J. 1981. Studies in neotropical Senecioneae II. Transfers to genus *Pentacalia* of north Andean species. *Phytologia* 49 (3): 241–260.
- DILLON, M. O. & N. HENSOLD 1993. Asteraceae. In: BRAKO, L. & J. L. ZARUCCHI (eds.), Catalogue of the Flowering Plants and Gymnosperms of Peru. *Monogr. Syst. Bot. Missouri Bot. Gard.* 45: 103–189.
- DILLON, M. O. & A. SAGÁSTEGUI 1999. *Caxamarca*, a new monotypic genus of Senecioneae (Asteraceae) from Northern Peru. *Novon* 9: 156–161.
- FOSTER, R. C. 1958. A catalogue of the ferns and flowering plants of Bolivia. *Contr. Gray Herb.* 184: 1–223.
- FUNK, V. A. 1997a. Compositae of Ecuador, II. Diversity and distribution. In: VALENCIA, R. & H. BALSLEV (eds.), *Estudios Sobre Diversidad y Ecología de Plantas*, pp. 79–95. Pontificia Universidad Católica del Ecuador, Quito; Aarhus University, Aarhus.
- FUNK, V. A. 1997b. *Xenophyllum*, a new Andean genus extracted from *Werneria* s. l. (Compositae: Senecioneae). *Novon* 7: 235–241.

- FUNK, V. A., ROBINSON, H., MCKEE, G. S. & J. F. PRUSKI 1995. Neotropical montane Compositae with an emphasis on the Andes. In: CHURCHILL, S. P., BALSLEV, H., FORERO, E. & J. L. LUTEYN (eds.), *Biodiversity and Conservation of Neotropical Montane Forests*, pp. 451–471. New York Botanical Garden, Bronx.
- KING, R. M. & H. ROBINSON 1987. The genera of the Eupatorieae (Asteraceae). *Monogr. Syst. Bot. Missouri Bot. Gard.* 22: 1–581.
- KING, R. M. & H. ROBINSON 1995. Additions to the genus *Crossothamnus* from Colombia and Ecuador (Alomiinae: Eupatorieae: Asteraceae). *Phytologia* 78 (5): 381–383.
- LA DUKE, J. C. 1982. Revision of *Tithonia*. *Rhodora* 84 (840): 453–522.
- NESOM, G. 1990. Taxonomy of the genus *Laennecia* (Asteraceae: Astereae). *Phytologia* 68 (3): 205–228.
- NESOM, G., ROBINSON, H. & A. GRANDA 2001. A new species of *Chiliotrichiopsis* (Asteraceae: Astereae) from Peru. *Brittonia* 53: 430–434.
- NORDENSTAM, B. 1997. The genus *Aequatorium* B. NORD. (Compositae-Senecioneae) in Ecuador. *Comp. Newsl.* 31: 1–16.
- PRUSKI, J. F. 1997. Asteraceae. In: STEYERMARK, J. A., BERRY, P. E. & B. K. HOLST (eds.), *Flora of the Venezuelan Guayana*, Vol. 3: 177–393. Missouri Botanical Garden, St. Louis.
- ROBINSON, H. 1999. Generic and subtribal classification of American Vernonieae. *Smithsonian Contr. Bot.* 89: 1–116.
- ROBINSON, H., NORDENSTAM, B., LUNDIN, R. & P. M. JØRGENSEN 1999. Asteraceae. In: JØRGENSEN, P. M. & S. L. LEÓN-YÁÑEZ (eds.), *Catalogue of the Vascular Plants of Ecuador*. *Monogr. Syst. Bot. Missouri Gard.* 75: 260–314.